

We claim:

1. A linear recording medium, for use with a recording drive designed to read parallel servo transitions having a substantially non-zero azimuth angle, and no modulation of distance between immediately adjacent parallel servo transitions on the medium, comprising a series of parallel servo transitions at a zero azimuth angle.
2. The medium of claim 1, further comprising modulated distances between adjacent parallel servo transitions as a function of location of the transitions on the medium.
3. The medium of claim 1, in which the linear recording medium is a magnetic recording medium.
4. The medium of claim 1, in which the linear recording medium is a tape recording medium.
5. The medium of claim 1, in which the second series has a roughened gap edge profile.
6. The medium of claim 5, in which the roughened gap edge profile has peak-to-peak roughening amplitude,  $A$ , equal to  $\left(\frac{T_w}{2}\right) \tan \theta$ , where  $\theta$  is a slant angle and the profile has a cross track wavelength  $\lambda$  approximately equal to a servo read head track width  $T_w$ .

7. A system for intentionally generating position error signal in a data recording drive designed to read only servo transitions having a substantially non-zero azimuth angle and no modulation of distance between immediately adjacent parallel servo transitions on the medium, comprising in combination:
  - 5 a) parallel servo transitions at a zero azimuth angle; and
  - b) a servo read head connected to the drive.
8. The system of claim 7, in which the medium further comprises modulated distances between adjacent parallel servo transitions as a function of location of the transitions on the medium.
- 10 9. The system of claim 7, in which the parallel servo transitions at a zero azimuth angle have a roughened gap edge profile.
10. The system of claim 9, in which the roughened gap edge profile has peak-to-peak roughening amplitude,  $A$ , equal to  $\left(\frac{T_w}{2}\right)\tan\theta$ , where  $\theta$  is a slant angle and the profile has a cross track wavelength  $\lambda$  approximately equal to a servo read head track width  $T_w$ .  
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11. A method of evaluating performance of a linear recording drive designed to read servo transitions having a substantially non-zero azimuth angle without modulation of distance between immediately adjacent parallel servo transitions on a linear recording medium compatible with the drive, comprising  
20 a) providing a linear recording medium, upon at least a portion of which are:
  - (i) first parallel servo transitions at a non-zero azimuth angle; and

(ii) second parallel servo transitions at a zero azimuth angle;  
and

- b) using the drive to read position error signal from the first parallel servo transitions at each transverse location on the medium;
- c) comparing the position error signal to an expected value;
- d) using the drive to read system noise from the second parallel servo transitions; and
- e) comparing the system noise to an expected value.

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10 12. The method of claim 11, in which the second parallel servo transitions at a zero azimuth angle have a roughened gap edge profile.

13. The method of claim 12, in which the roughened gap edge profile has peak-to-peak roughening amplitude,  $A$ , equal to  $\left(\frac{T_w}{2}\right) \tan \theta$ , where  $\theta$  is a slant angle and the profile has a cross track wavelength  $\lambda$  approximately equal to a servo read head track width  $T_w$ .

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